

In The Field

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Teacher's Conservation Education Newsletter

Brought to you by Clinton County Conservation

Science As Inquiry ~ Fossil Activity

by Jessica Steines, Interpretive Naturalist

Here is an activity I always wish I had time to do in the classroom but, it won't fit into my usual one-hour presentation time slot! After reading the Iowa Core Science standards, more specifically Earth and Space discipline, I realized this would be perfect for classrooms, 3rd grade and up, to demonstrate how fossils are mineralized.

Activity is from the book, *Geology Rocks! ~ Turn That Bone to Stone!* by Cindy Blobaum

You will need: scissors, sponge, cup, small pan, epsom salt and food coloring.

Cut two pieces of sponge into bone shapes, one for comparison, the other for the experiment. Fill a cup with hot water. Stir in salt until no more dissolves. Add a few drops of food coloring; then pour this mixture into the pan. Place one sponge bone into the pan and watch the water travel through the holes in the sponge. Next, set the pan in a place where it won't be disturbed for several days.

When the sponge is completely dry, feel it. Is it harder or softer than the comparison piece? Look carefully in the holes. What do you see? All living things have holes in them. (You sweat through holes in your skin.) Petrified fossils are made when water that has lots of minerals in it seeps into the holes found in natural items (like bones, plant parts or seashells, for example). The minerals cling to the sides of the holes. When the water dries up, the minerals crystallize in the holes, replacing the original material that may have rotted away. The minerals in the salt formed crystals, petrifying your sponge "bone"!

After the students learn how objects are fossilized, we can help your classroom understand and apply knowledge of fossils and the evidence they provide of past life on Earth by bringing in a variety of fossils, replicas, artifacts and rocks. Even better would be to visit Eden Valley Refuge to see first hand the imbedded fossils in the bluffs of creatures that created the limestone that used to be the floor of the shallow sea that is now Iowa. The nature center also houses many types of rocks, fossils of ancient Iowan sea creatures and even some fossilized Edmontosaurus and Brontothere bones! Eden Valley also displays evidence of many human uses of these sedimentary rocks.



Into the Schools...Assembly Style

by Jill Schmidt, Interpretive Naturalist

As most of you know, we are a team of professionals that can be a great resource for you and your students. We are well rounded when it comes to nature knowledge and are creative, fun, interactive and, most importantly, flexible to your needs!

Throughout the cold months, most of our work includes coming into your schools and providing programs on a variety of nature related topics. These include, but are not limited to, *Hibernation*, *Into Winter*, *Animal Tracks* and *Vertebrates*.

In addition to coming into your individual classrooms, we are opening up new possibilities for our local schools, and although most of our programs work best in small groups, there are some that can be utilized in larger groups. Assemblies are a great way to reach a lot of students in a short amount of time. It can be difficult to arrange several classes to participate in a small group

programs so requesting us to come into your schools for an assembly would solve that issue. We have several programs that would work great in a large group setting and if there is a topic that is of interest to you or that fulfills a curriculum need, we are capable of putting something together with few exceptions.

Two of our assembly-friendly programs include live animal demonstrations. Introduce your students to live birds of prey, reptiles and amphibians of Iowa. In these two separate programs, we teach your students about the importance of these animals in our habitats as well as discuss some of the myths behind them.

Let us reach your student body in a large way, call us today to set up your assembly!



Spring 2013 Teacher of the Semester

Midland Elementary School

Diane Gnade



Every semester, Clinton County Conservation recognizes local teachers who have shown their continuous support of our programming by involving their students in the outdoors through field trips and classroom presentations. For the spring semester of 2013, we would like to award the "Teacher of the Semester" to Diane Gnade, a first-grade teacher at Midland Elementary School in Oxford Junction. In addition to the recognition, Diane will be receiving a \$50 award that she can use towards any of her classroom outdoor adventures.

Diane has been using the Clinton County Conservation Program for the past twelve years. Every fall, she joins forces with Midland's Roanne Willey's first-grade students and plans a field trip to Eden Valley. They often plan their trip around the beautiful fall colors the park has to offer and the butterfly migration.

The field trip is filled with a variety of hands-on activities. The students spend time on a nature hike that takes them to a swinging bridge and a look-out tower. While on the hike, students collect an assortment of leaves to take back to school with them to be used in art projects.



Patiently waiting for their turn to roast hot dogs!

because it is not only close to their school but also it is a clean and well kept park. She believes the importance of trips like this to Eden Valley are teaching the students about nature and learning how to enjoy it.

The last few years, the field trip to Eden Valley has been possible due to the Clinton County Conservation Foundation's bus scholarship that helps defray the cost of bussing to parks throughout Clinton County.

In addition to the field trips, Diane invites Chuck Jacobson, one of CCB's naturalists, into her classroom throughout the school year to present different environmental topics to her students. This is Diane's 22nd year of teaching for Midland, all in first grade. She plans to use the \$50 to add non-fiction books about insects, animal habitats and trees to her classroom. Thank you Diane, for making us a part of your classroom!



Students making a colorful collage of fall colors.

Students are also given the chance to spend time in the nature center where they learn about the various Iowa reptiles and amphibians. Students are given the opportunity to hold and touch the resident snakes, turtles and salamanders. This is one of the most memorable experiences for both the students and the teachers!

Even lunch time is a learning experience. Students get the opportunity to cook their lunch over a campfire. They roast hot dogs and then top them off with their favorite dessert, s'mores!

Diane enjoys going to Eden Valley for her classroom field trips



Students our getting a closer look at Iowa turtles.

First-hand learning: CCCB educates, entertains and fosters exploration

by Jean Eggemeyer, excerpt from January 2013 edition of *Radish Magazine*. Read article in its entirety at radishmagazine.com

On scores of warm days last year, groups of school children excitedly boarded the Blue Heron pontoon boat docked on the backwaters of the Mississippi River at the Rock Creek Marina just south of Camanche, Iowa. The boat, operated by the Clinton County Conservation Board (CCCB), headed out for more than 160 cruises in 2012 to provide passengers a unique, up-close look at the natural and man-made river environment.

"It's really a wonderful, engaging program for kids," says Kristi Lueders, second-grade teacher at Whittier Elementary School in Clinton who takes her classes on a five-hour Blue Heron trip each spring. "Even though our town is right on the river, many of the kids have never been on it."

Piloted by naturalist guides, the Blue Heron explores the Mississippi and its backwaters, sloughs and banks from May into late fall. In many cases the excursions are free of charge. In operation since the fall of 2002, the CCCB's eco-cruises serve hundreds of school children, as well as outdoor groups, tourists and the general public. The boat holds up to 26 passengers at a time.

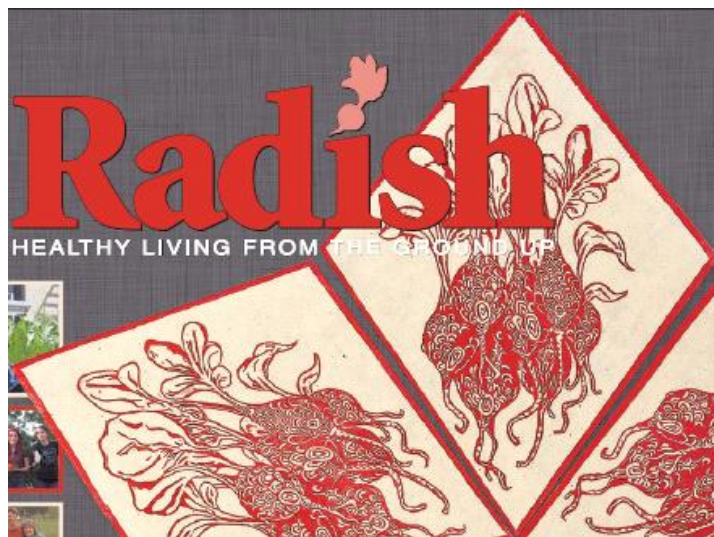
"We encourage people to get into close study of the wildlife we encounter," says Chuck Jacobsen, interpretive naturalist with the CCCB, a department of Clinton County, Iowa, government.

Depending on the season, passengers will see bald eagles, peregrine falcons, osprey, reptiles, turtles, fish, plants and other wonders of the river. The boat lands on some tours to allow riders to hunt for rocks and shells and search for animal tracks.

"It's interesting how the tour really fits in with our curriculum," adds Lueders. "The things we see and experience tie directly in with our social studies and science lessons and objectives."

For more than six years the Clinton County Conservation Foundation, partner to the CCCB, has been raising funds for an environmental education center, securing hundreds of thousands of dollars in grants and donations from more than 160 businesses and individuals. As a result, visitors can now enjoy an impressive new addition to the CCCB's resources before or after boarding the Blue Heron: the Mississippi River Eco Tourism Center, located near the Blue Heron dock.

Developed by a small group of staff and board members with a vision for a premier ecotourism destination, the center opened in April of 2012. "There are times that I find it hard to believe that



we were able to accomplish such a monumental task," says Walt Wickham, CCCB executive director. "But we have a great board, a great foundation, fantastic staff and some terrific volunteers who all made it possible."

The 8,400-square-foot, fully-handicapped-accessible facility is designed to encourage learning about the biological diversity in and around the Mississippi River. The structure includes an 8,000-gallon aquarium filled with fish species found in the river; a 30-person classroom/theater; a large community room available for public use; and a huge deck that overlooks the river 18 feet below.

"We've had a phenomenal, positive response from the public since opening," says Mark Roberts, CCCB environmental education coordinator. More than 150,000 people visited the center and the Rock Creek Marina and Campground complex in 2012, and that number is expected to rise as word spreads.

"One benefit of the center is that it provides a large, indoor venue to host school groups," explains Jacobsen. "That way, weather doesn't get in the way of continuing to educate and entertain our visitors."

"First-hand learning is what we do best," sums up Roberts.

Winter Sports, at our Place or Yours!

The Clinton County Conservation Department offers winter sports equipment for use by schools. We can use them as part of a field trip to our natural areas or nature centers or we can deliver them to your school and either teach your students there or leave them for a longer unit through your Physical Education Dept.

We have 50 pairs of ice skates in various sizes that have been donated to us. They can be used at Rock Creek or anywhere when appropriate ice is present. We clear an area in front of the Mississippi River Eco Tourism Center for skaters.

We have 25 sets of cross country skis at Rock Creek and another 35 sets at the Wapsi Center that can be used in the parks or they

can be transported to schools or other parks. There must be at least 2 inches of snow cover where the equipment is being used.

Lastly, we have 35 pairs of new aluminum frame snowshoes at Rock Creek and the same number at the Wapsi Center that can be used on-site or taken on the road. Again, snow is needed!

While not a "winter" activity, we also use and loan out archery equipment. With a Kevlar arrow stop curtain, it works great in a gym!



The Scholarship amount is \$2 per mile per bus, round trip with a minimum award of \$20 and a maximum award of \$100 per bus per field trip.

Date of field trip _____

Internal use only: Round trip miles, school to park_____ Scholarship award \$_____ Date received_____

STARLAB IN YOUR SCHOOLS

Take your students on a trip to the stars! There is still time, Starlab is available for your school to check out March 1st through March 20th. Invite a naturalist to share their knowledge on the different topics of outerspace through this interactive star gazing activity! Students get a chance to crawl inside a portable planetarium where they get an up-close and personal view of the millions of stars that surround Earth. They will listen and learn about the different constellations and the historic stories that helped create them all while being surrounded by the projected stars. Call us today to help book the STARLAB for your school.

Set Up Your Field Trip Today!

- Mark Roberts ~ mroberts@clintoncounty-ia.gov
- Chuck Jacobsen ~ cjacobsen@clintoncounty-ia.gov
- Jessica Steines ~ jsteines@clintoncounty-ia.gov
- Jill Schmidt ~ jschmidt@clintoncounty-ia.gov

